



MARYLAND GREEN BUILDING COUNCIL
MEETING SUMMARY
LOWE HOUSE OFFICE BUILDING ROOM 150
26 MARCH 2014

Attendees:

Tom Liebel – MDGC
Stephen Gilliss – DGS
David Costello - MDE
Anja Caldwell – MDGBC
Helen Stewart –DNR
Prescott Gaylord - MDGBC
Mark Beck - USM
Lauren Buckler - DGS
Ellen Robertson DGS

Kristen Ahearn - MEA
Anne Raines - MDP
Meg Andrews – MDOT
David Lever PSCP
Lisa Ferretto - MDGBC
Soren Graae – DBM
Christine Varney – MDGBC
Kelly Walker - DGS

Guests:

Nichele Parker – MEA
Tamara Toles-O’Laughlin - MEA
Chris Parts - AIAMD
Lorraine Doo- USGBCMD

I. Chairman Tom Liebel brought the meeting to order. Introductions of all attendees followed.

A. Kelly Walker - DGS staff was introduced to the Council. Kelly will help with meeting summaries and other administrative functions.

II. Chairman Liebel requested a move to approve the meeting summary from the February 26, 2014 meeting

III. Stephen Gilliss spoke briefly about the status of House Bill 207 which would enable the use of codes in addition to LEED or numerically based green building ratings systems currently used in law to define high performance building.

- A. The legislation has gotten through the House but still has to go to the Senate.
- B. Tom Liebel noted there was a language change to formalize public input. This was added to provide inclusiveness for the opposition organizations.
- C. Lauren Buckler noted that DGS would be starting to post meeting summaries and other information on the DGS website. DGS is hoping that an upcoming overhaul of the DGS website will allow the Council to have its own site.
- D. David Lever noted that the legislation does not exclusively specify the IgCC. He also noted that his department’s relocatable building regulations reference IgCC Chapter 8 - indoor environmental quality. They are also looking for other references on Maryland Children’s environmental health. Tom Liebel asked if David would want the Council to review it. David said that they would, later in the year.

- IV. David Lever introduced Nichelle Parker of MEA to discuss how Maryland is moving schools in the direction to Net Zero Schools
- A. Nichelle Parker w/MEA - was with North Carolina and working in the private sector
 - B. Nichelle presented a Power Point that she can share with the council on request
 - C. She has been working with David Lever on this.
 - D. Net zero – Is defined as a school that produces as much energy as it uses over a given year. There are no New Net zero schools in MD however there are some retrofits.
 - E. There are 2 Net Zero pilot projects one in Baltimore City, Graceland Park and one in Howard County, Wilde Lake Middle School.
 - F. There are only 1 or 2 dozen in the country currently. Kentucky has the most. Arlington VA. Is designing one currently.
 - F. No More than 1 school per county the school must be new. (no retrofits)
 - G. Must be in BGE service territory.
 - H. MEA is providing \$9M in funding for 3 schools @ \$2.7 million per school to support the move from LEED Silver to Net Zero. MEA's funding will provide costs for Design/Construction. The County/City will go through the normal A/E selection process and MEA will add a vetted A/E firm with Net Zero experience to assist in the design. Firms will be from our Climate Zone. There are no MD firms. They are from NC, SC, VA, NY.
 - I. MEA will use a third party architecture firm to review the design
 - J. The schools will be designed from the start as Net zero school. They will not just add on to achieve Net zero.
 - K. Schools will need to be on the grid. They will be Net zero energy – all fuels considered.
 - L. DOE considers Net zero to be less than 25 kBtu/sf/year.
 - M. Wilde Lake's design is at 25 and will probably be the first constructed Net zero school in the State
 - N. The design must consider all schools uses, not just daytime educational use.
 - O. It took Kentucky 4 or 5 schools to reach Net zero but we have the benefit of those schools to shorten the learning curve.
 - P. Also using educational approach as part of the curriculum to socialize Net zero. Principals and teachers are already being involved in the discussion process. The first school will not be completed until 2017.
 - Q. Nichelle took questions and comments:
 - 1. Tom Liebel asked if there will be Measurement & Verification requirements? Nichelle – Yes school engineers are being trained to handle the new technologies and energy use will be closely tracked. There will also be retro – commissioning over time.
 - 2. Tom also asked if there would be net zero water use. Nichelle said they are going to work toward that and one of the consulting firms is a specialist in water saving.
 - 3. Tom asked how does this spread beyond these schools? Nichelle said MEA hopes to work with the Public Service commission (PSC) to spread to other schools.
 - 4. Anne Raines asked if we will we be able to eventually retrofit schools. Nichelle said that they will also work in that direction but the current funding is for new Net zero schools.

5. David Lever said that funding will be a critical element as these schools are using grants now. Tom asked if there a funding model? David Lever said they are looking at something like an Energy Performance Contract.
6. Anja asked if there are any public/private partnerships possible. David said they can look into it but he's not sure what school system would want to be a guinea pig on that as there would be risk involved.
7. Mark Beck asked how does Net Zero look in terms of carbon emissions? Nichelle said the models give us the numbers but she doesn't have specific information on that. Mark said it would be good to achieve "net zero" GHG emissions along with net-zero energy consumption.
8. Energy wise, Lisa Ferretto noted a typical School is 80 KBTU/sf. Nichelle said the old Wilde Lake Middle School was 38. David Lever said typical is about 45.
9. High schools are a different animal because they have more uses than elementary schools or middle schools. All of the additional activities make it challenging. This makes High Schools more difficult to. Nichelle is not aware of any High Schools in the country.
10. Christine Varney asked what measures are being used to accomplish the goal? Nichelle listed tighter envelope, PhotoVoltaics (PV), GEO Thermal, Behavior, LED's. They are finding PV systems appears less expensive. They are saving 20 – 25% savings through design.
11. Tom asked if there other plans for government facilities? None currently but hopefully in the future.

V. The next agenda item was a discussion of upgrading the existing State building inventory.

- A. Tom asked if we can or are using LEED for Existing Buildings. Lauren Buckler said its not something we are doing now. We only do energy Performance Contracts (EPC) so we don't get into other LEED/green building issues. Tom suggested we look at LEED EB for some low hanging fruit that we could incorporate. Lauren added that DGS only operates 50 of the 5000 buildings that are owned by the State. Maybe the council could address operation standards.
- B. Mark Beck said that the USM Shady Grove Center (which houses the National Energy Center) wants to pursue LEED EB Certification.
- C. Tom cited Empower MD and noted that energy is most expensive thing to correct so... Can we extend what we're doing already? Are other agencies looking into this?
- D. Meg Andrews said MDOT is working on environmental operations. We can talk to them and see how they're doing it?
- E. Anne Raines asked Lauren to give a little more background about state buildings inventory? What format does it take and is it available to the public? Lauren said there isn't one but DGS maintains the State's Energy Database. It tracks all of the State buildings and the University Systems from a meter perspective only. DGS sees the one meter but there are sub meters for College Park so their energy staff does know the sub metering breakdown. Mark Beck would like to have more metering. Tom thinks that might be a goal we could work toward. To have metering for all fuels and water. You can't improve what you can't measure.
- E. Lauren noted that DGS had done a seismic survey of buildings which may be a more extensive inventory which is a list of building names and square footages. It includes Juvenile Services, Park Services and Military. Taxation and planning

may also have some type of inventory. DGS also has a database on leased properties. Tom asked if there could be requirements for leasing or bonus points or bonus points for a property that is LEED-EB? Lauren said the leasing guidelines have been revised to include recycling, energy measures. They apply as leases turn over.

F. David Costello said there are supposed to be energy plans for each agency. Have coordinators ever put together a plan? Lauren replied there is a list of 58 Energy Coordinators for all of the state agencies. Only one of the 58 coordinators has written a plan. DGS was asked at StateStat to get a job description for the coordinators.

G. Tom had a self proclaimed wacky question. Could we share a broader environmental agenda with the energy coordinators? Lauren said it's a potential but energy is their first challenge. There are also agency sustainability officers. Tom asked if anyone can come up with a way to do this why they're doing the energy plans? Lauren said they would still need resources and training as they might not know materials, finishes, indoor air etc. Tom asked if we could pull together an action plan to present to the legislature?

H. David Costello – These 58 could be combined. Recycling is already law. It's a great recommendation to have more sustainability coordinators. Governor O'Malley would support it but he's on his way out. Might need state stat to push it. Tom suggested a Summit for the 58. Maybe we can provide a handbook to get this together. David Lever agrees it needs to be institutionalized but how does it transfer into organized efforts over many years? Tom said the 58 need to have reporting requirements. David Costello noted there is reporting on recycling and we're behind. Lauren noted that there is no energy reporting required. Tom thinks we need to try to make this happen. Take it as a homework assignment to think of ways to make this happen.

VI. Next discussion was on reducing water consumption – ReWaterMD

A. Tom Liebel stated that the production of clean water uses a lot of energy so reducing consumption helps in energy and water shortage. In new buildings we do all of the normal new lower flow fixtures etc. Is there a policy for building improvements focused on plumbing?

B. David Lever – Is there any way to tie WHIP (MD's wildlife Habitat Incentives Program)? Reduce nitrogen hydrogen phosphorus....water is powerful issue with waste etc. Helen Stewart knows WHIP – there are caps on discharges 2025-2030..caps are in play. Have to have water conservations plans.

C. Tom asked what USM is doing. Mark Beck responded that there are student groups on campus who have competitions on things like this. There is great momentum (re environmental issues) on every USM campus and the students are often leading the charge. He also likes the IGCC because we can make it a requirement and budget to something specific (vis-à-vis applying a 2% allowance)

D. Christine Varney thought there might be an opportunity to tie into rainwater & storm water for process water. So savings could come from SWM.

E. Tom asked if we have water costs. Lauren said we do collect some data but its vague and bills are not monthly. Tom wondered if we have any sense of how much water we use.

F. Meg Andrews thinks there is something on the books to do reduction. Lauren said there is an executive order to reduce water consumption. It might need to be legislated. For DGS to track it would likely require a position or two. We don't currently have the staff for it. Tom thinks we could get something done. May

have to task a few Council members to look into it. Need to find out who has the information and how we can do it.

G. Helen thought MES did a study for the Governor.

VII. Future Council Focus

A. Tom -what's next? Looking at environmental footprints

B. David Lever – Sustainable Growth Commission. See what our connections are to that effort. MEDCO is working on a fund to look at this as well. Tom asked what are their metrics for defining sustainability? He's been meaning to get Jon Laria, Chair of the Sustainable Growth Commission to see how we can work together including IgCC coordination.

C. David Lever believes we also need some relief on codes to make redevelopment possible. Tom has seen storm water regs push the sacrifice of historic landscape in Baltimore City.

VIII. Once Around the Table

A. Tom L – Is now a Green Globe Professional. He went on line and took a course and passed a test. It's still free before April 15, 2014. It was quite simple which is scary on one level ..but good to understand.

B. Meg Andrews – Electrical Vehicle Council is looking to revamp incentives program. There is legislation for a rebate for charging equipment up to \$5,000 if it makes it to the Senate.

C. Chris Parts – Would like to talk to Nichelle about having a Net Zero presentation at their September program.

D. Lorraine Doo reminded al that April 26, 2014 is the Green School Summit for the National Capitol Planning Commission.

IX. The meeting was adjourned earlier than the usual 12:00PM. The next meeting is scheduled for April 23, 2014 at 10 AM in Room 150 of the Lowe House Office Building.

The preceding is intended as a summary only of the discussions held on this meeting date. Council members are requested to review the summary and notify the writer of any errors, omissions or unintended misrepresentations of the discussion.